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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/583,345	06/19/2006	Peter Kwok Hing Lam	P71317USD	9774
136 7590 05/10/2011 JACOBSON HOLMAN PLLC 400 SEVENTH STREET N.W. SUITE 600 WASHINGTON, DC 20004				
EXAMINER				
ENG, ELIZABETH				
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

# Office Action Summary

## Application No.

10/583,345

## Applicant(s)

LAM ET AL.

## Examiner

ELIZABETH ENG

## Art Unit

1762

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 2/22/2011.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 16-34 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 16-34 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB-08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### Response to Applicant's Remarks

1. Applicant's arguments filed 2/22/2011 have been fully considered but they are not persuasive. A response to the applicant's arguments is given below.

### 35 U.S.C. 103 Rejection

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

4. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was

not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

5. Claims 16-23 and 26-32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Vaanbengaard et al. (US Pat. No. 6,558,792) further in view of Minoru et al. (EP 0479311 A2).

6. Regarding claim 16, Vaanbengaard et al. teaches an adhesive composition [abstract] comprising a) a block copolymer elastomer as a cohesive strengthening agent, such as styrene-butadiene-styrene copolymer or styrene-isoprene-styrene copolymer [column 4, lines 53-55], and b) a rubbery homopolymer component that is preferably polyisobutylene [column 4, lines 28-31], wherein (i) styrene is a mono alkenyl arene monomer and (ii) butadiene or isoprene is a linear unsaturated hydrocarbon, and polyisobutylene is a branched, saturated hydrocarbon chain.

7. Regarding claim 18, 19, and 20, Vaanbengaard et al. teaches the block copolymer can be styrene-butadiene-styrene copolymer (SBS) or styrene-isoprene-styrene copolymer (SIS) [column 4, lines 53-55], wherein SBS copolymer and SIS copolymer are triblock copolymers.

8. Regarding claim 21, Vaanbengaard et al. teaches the block copolymer may be a physically cross-linked elastomer [column 4, lines 32-33].

9. Regarding claim 22, Vaanbengaard et al. teaches the block copolymer can be styrene-butadiene-styrene copolymer or styrene-isoprene-styrene copolymer [column 4, lines 53-55], wherein styrene is an alkenyl arene monomer.
10. Regarding claim 23, Vaanbengaard et al. teaches the block copolymer contains intermediate monomers such as butadiene and isoprene, wherein butadiene and isoprene are linear, unsaturated hydrocarbons. Vaanbengaard et al. further teaches the homopolymer is polyisobutylene, wherein isobutylene is a linear, saturated hydrocarbon.
11. Regarding claim 27, Vaanbengaard et al. teaches the adhesive composition comprises 0-10% by weight of cohesive strengthening agent or block copolymer [column 3, lines 58-59], wherein 0-10% by weight overlaps the claimed range of 1-70% by weight, and 30-60% by weight of rubber component or polyisobutylene [column 3, line 55], wherein 30 to 60% by weight is within the claimed range of up to 70% by weight.
12. Regarding claim 28, Vaanbengaard et al. teaches the adhesive composition further comprises one or more water-swellaable hydrocolloids [column 3, lines 14-15].
13. Regarding claim 29, Vaanbengaard et al. teaches the adhesive composition comprises 30-60% by weight of one or more hydrocolloids [column 3, lines 55-56], wherein 30-60% by weight is within the claimed range of 5-60% by weight.
14. Regarding claim 30, Vaanbengaard et al. teaches the adhesive composition further comprises a tackifier resin [column 4, line 48].

15. Regarding claim 31, Vaanbengaard et al. teaches an ostomy appliance including an adhesive wafer comprising the adhesive composition of claim 16 [column 1, line 18].

16. Regarding claim 32, Vaanbengaard et al. teaches an ostomy appliance including an adhesive wafer comprising the adhesive composition of claim 19 [column 1, line 18].

17. Vaanbengaard et al. teaches the block copolymer is suitably styrene-butadiene-styrene copolymer or styrene-isoprene-styrene copolymer [column 4, lines 54-55], wherein butadiene and isoprene are linear, unsaturated hydrocarbons, but is silent with respect to the block copolymer containing at least one block of a linear or branched, saturated hydrocarbon. However, in the same field of producing an adhesive, Minoru et al. teaches that styrene-isobutylene-styrene block copolymers have better tackiness and adhesion than styrene block copolymers containing conjugated dienes such as styrene-isoprene block copolymer and styrene-butadiene block copolymers [Page 2, second paragraph; Page 6, line 4 and Table].

18. It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the styrene-isobutylene-styrene copolymer of Minoru et al. as the block copolymer of Vaanbengaard et al. in order to improve tackiness and adhesion of the adhesive composition of Vaanbengaard et al., wherein the isobutylene of the block copolymer would be the same as the isobutylene of the polyisobutylene homopolymer of Vaanbengaard et al (claim 17).

19. Regarding claim 26, Vaanbengaard et al. teaches the polyisobutylene homopolymer is Vistanexx from Exxon Chemical Co. as grade LM-MH [column 5, lines 46-47] but is silent with respect to the molecular weight being between 20,000 and 100,000. However, since Vannbengaard et al. uses the same isobutylene polymer as the instant invention, wherein the instant invention uses Vistanexx from Exxon Chemical Co. as grade LM-MH as well [Page 15, lines 28-29], there is reasonable basis to believe that the molecular weight of the polyisobutylene of Vaanbengaard et al. would have a molecular weight within the claimed range. Since the PTO cannot perform experiments, the burden is shifted to the applicant to show an unobvious difference. *In re Fitzgerald*, 619 F.2d 67, 70, 205 USPQ 594, 596 (CCPA 1980).

20. Claims 24 and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Vaanbengaard et al. further in view of Minoru et al. as applied to claim 16 above, further in view of Sorensen et al. (US Pat. No. 4,231,369).

21. Regarding claims 24 and 25, Vaanbengaard et al. teaches using physically cross-linked, styrene block copolymer elastomers [column 4, lines 53-55] and Minoru et al. teaches using styrene-isobutylene-styrene block copolymers, but the combination of Vaanbengaard et al. and Minoru et al. is silent with respect to the molecular weight of the styrene block of the copolymer being between 1,000 and 10,000 (claim 24) and the molecular weight of the isobutylene block being between 20,000 and 100,000 (claim 25). However, in the same field of forming an ostomy adhesive comprising a physically cross-linked styrene-olefin-styrene block copolymer [column 5, lines 25-30], wherein the

olefin can be polyisobutylene [column 5, line 46], Sorensen et al. teaches the styrene blocks have a molecular weight of from 2,000 to about 100,000, wherein the range overlaps the claimed range of 1,000 to 10,000, and the olefin blocks have a molecular weight of from 25,000 to 200,000, wherein the range is within the claimed range of 20,000 to 100,000 [column 5, lines 33-36], in order to sufficiently provide the adhesive with low resistance to quick deformation and rapid recovery to its original shape [column 4, lines 64-68] due to rapid body movement [column 3, lines 32-33].

22. Since ostomy adhesives are adhered to patients, it would have been obvious to one of ordinary skill in the art at the time the invention was made for the styrene and isobutylene blocks of Vaanbengaard et al. and Minoru et al. to have the molecular weights taught by Sorensen et al. in order to provide the adhesive of Vaanbengaard et al. with low resistance to quick deformation and rapid recovery to its original shape due to rapid body movement.

23. Claims 33 and 34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Vaanbengaard et al. further in view of Minoru et al. as applied to claims 16 and 19 above, further in view of Bellingham et al. (US Pat. No. 5,109,874).

24. Regarding claims 33 and 34, Vaanbengaard teaches using an adhesive in a wound dressing [column 1, line 18] but is silent with respect to the wound dressing comprising a water-impervious backing layer or film. However, it is well known in the art for a wound dressing to contain a water-impervious film in order to protect the wound from wetness and infection. Bellingham et al. for example teaches a wound patch



containing a gas and liquid impermeable member that is adhesively sealed to the skin around a wound to prevent the entering or exiting of gases and liquids through the wound, which allows the user to engage in physical activity without concern for contaminants entering or leaving the wound area. Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Vaanbengaard and Minoru et al. with Bellingham for the expected benefit of protecting wounds from contamination.

#### **Response to Applicant's Arguments**

25. Applicant's arguments filed 2/22/2011 have been fully considered but they are not persuasive for the following reasons below.

26. The Applicant argues that Vaabengaard et al. teaches the cohesive strengthening agent, or the block copolymer, is a vulcanized diene rubber [column 4, lines 32-40]. However, Minoru teaches only that unvulcanized SBS and SIS copolymers have poorer tackiness and adhesion than PIBS (polyisobutylene-styrene) [Page 2, top]. Therefore, the teachings at issue in Minoru have no relevance to the teachings at issue in Vaabengaard. The PTO fails to provide the desirability for modification of Vaabengaard with Minoru. Moreover, nothing in the cited references teaches or suggests that PIBS exhibits the same cohesive strength exhibited by the vulcanized SBS and SIS taught by Vaabengaard. Therefore, the rejection fails to establish the

requisite predictability that the replacement PIBS material would satisfy the purpose of the replaced vulcanized SBS and SIS material.

27. The Examiner respectfully disagrees. Even if Vaabengaard teaches vulcanized SBS and SIS, while Minoru teaches unvulcanized SBS and SIS copolymers, Minoru still teaches that SIBS itself has good tackiness and adhesion compared to SBS and SIS. Because of these properties, it would have been obvious to one of ordinary skill in the art to use SIBS in the adhesive composition of Vaabengaard. Vulcanizing or crosslinking SIBS would only enhance the strength of the copolymer. Furthermore, Minoru et al. teaches the SIBS block copolymer having a specific number average molecular weight in order to provide sufficient cohesion to the composition [Page 3, line 11]. For these reasons, the Examiner finds the Applicant's argument unpersuasive.

28. The Applicant argues that Vaabengaard effectively teaches away from its combination with Minoru as alleged in the rejections. More specifically, the crosslinked cohesive strengthening agent, which is an elastomer, taught by Vaabengaard [column 4, lines 32-46] has profound effects as described by Billmeyer, Textbook of Polymer Science 3rd Ed. (1984) in transforming the elastomer into a strong, elastic, tough rubber. An elastomer characteristic, essential for crosslinking, is unsaturation. As opposed to the unsaturated diene elastomer of Vaabengaard, which is cross-linked to form the cohesive strengthening agent, PIBS used by Minoru is a saturated copolymer, which is unsuitable for crosslinking, and so, for the elastomer of Vaabengard, which must be crosslinked. Accordingly, by requiring the cohesive strengthening agent to be

an unsaturated elastomer that is crosslinked, Vaabengaard effectively teaches away from replacing one of the unsaturated elastomer embodiments SBS and SIS with the saturated PIBS as taught by Minoru.

29. The Examiner respectfully disagrees. The instant specification teaches the block copolymer a) comprises blocks capable of forming a physically crosslinked matrix, such as styrene-isobutylene-styrene [Page 7 last paragraph; Page 8, lines 4-5]. By arguing that the styrene-isobutylene-styrene block copolymer of Minoru does not have unsaturation needed for crosslinking, the Applicant is also arguing that the claimed block copolymer does not contain blocks capable of forming a physically crosslinked matrix as well, which is against the applicant's disclosure. Since the instant specification discloses that SIBS can in fact be crosslinked, the Examiner finds the Applicant's argument unpersuasive.

30. The Applicant argues that the instant adhesive comprising both PIB and PIBS shows unexpected results. Specifically, the instant application describes the disadvantages of prior art adhesives that use PIB together with either SBS or SIS, such as instability due to the fact that PIB, a saturated homopolymer, is inadequately compatible with the unsaturated(diene)-block- containing SBS and SIS copolymers; and further how the diene unsaturation of SIS and SBS causes adhesives to yellow and deteriorate. The use of PIBS in an adhesive overcomes these disadvantages. The subject application also teaches that PIBS has superior softness and barrier properties due to the soft IB block, unmatched by either SIS or SBS [Page 6, lines 1-15].

31. The Examiner respectfully disagrees. The unexpected results in the instant specification only show data regarding an adhesive composition specifically comprising polyisobutylene and styrene-isobutylene-styrene. However, instant claim 1 broadly claims an adhesive composition comprising a) a block copolymer containing a monomer alkenyl arene monomer and a linear or branched, saturated hydrocarbon chain, and b) a homopolymer containing the same linear or branched, saturated hydrocarbon of block copolymer a). This block copolymer could be styrene-ethylene-styrene and the homopolymer could be polyethylene, which the instant specification does not provide evidentiary support for. Furthermore, claim 1 does not contain the amounts of a) and b) needed to achieve the unexpected results. Whether the unexpected results are the result of unexpectedly improved results or a property not taught by the prior art, the "objective evidence of nonobviousness must be commensurate in scope with the claims which the evidence is offered to support." In other words, the showing of unexpected results must be reviewed to see if the results occur over the entire claimed range. *In re Clemens*, 622 F.2d 1029, 1036, 206 USPQ 289, 296 (CCPA 1980). Since the unexpected results in the instant specification are not commensurate with the scope of claim 1, the Examiner finds the Applicant's argument unpersuasive.

32. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

### **Conclusion**

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ELIZABETH ENG whose telephone number is (571)270-7743. The examiner can normally be reached on Mondays through Fridays from 9:30 am to 6:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Wu, can be reached at (571) 272-1114. The fax phone number for the organization where this application or proceeding is assigned is (571) 270-8743.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://portal.uspto.gov/external/portal>.

Art Unit: 1762

Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Elizabeth Eng/

/David Wu/

Supervisory Patent Examiner, Art Unit 1796